

REMARKS

This Amendment is being filed in response to the Office Action mailed April 19, 2006 which has been reviewed and carefully considered. Reconsideration and allowance of the present application in view of the amendments made above and the remarks to follow are respectfully requested.

In the Office Action, claim 20 is rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 7,079,751 (Suito). Claims 1-11, 13-18 and 20 are rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,714,594 (Dimitrova). Claims 12 and 19 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Dimitrova in view of PCT Publication No. WO 01/35409 (Christopher). It is respectfully submitted that claims 1-24 are patentable over Suito, Dimitrova and Christopher for at least the following reasons.

Suito is directed to a recording and playback apparatus which can detect a commercial message (CM) included in a television broadcast using a scene change detector 36 shown in FIG 3. The scene change detector 36 detects a scene change if a correlation

value is larger than a threshold value as shown in steps S14 and S15 of FIG 7. As shown in FIG 9, CM candidates are accumulated in step S22 and a commercial message is determined based on the distance between the CM points.

Dimitrova is directed to a process for content detection in video data where one or more features may be employed as indicators of start and/or end of commercials. As recited on column 7, lines 55-61, the following features may be used to detect commercial breaks:

- Scene change detection
- Black frame/Unicolor frame detection
- Letterbox detection
- Interlaced/progressive Indicator
- Keyframe distance

It is respectfully submitted that the Suito and the above-noted features in Dimitrova do not teach or suggest the present invention as recited in independent claim 1, and similarly recited in independent claims 7, 10 and 20 which, amongst other patentable features, requires (illustrative emphasis provided):

- detecting at least two consecutive scene changes within a number of consecutive frames;
- determining the beginning and ending of a commercial break among said plurality of separators by comparing a gap between said

plurality of separators, wherein the number of consecutive frames is less than a further number of frames of the commercial break.

There is simply no teaching or suggestion in Suito and Dimitrova of detecting a separator within a number of consecutive frames, where the number of consecutive frames is less than a further number of frames of the commercial break. Rather, Suito teaches to detect a scene change based on correlation value.

Further, Dimitrova teaches to detect commercial using a combination of features, such as the features noted above and recited on column 7, lines 55-61. For example, Dimitrova may use scene change detection combined with Black frame detection to detect commercial breaks. In Dimitrova, using a combination of features, one for trigger and another for verification of commercial breaks, prevents false-positives, as specifically recited on column 10, lines 16-19: "one feature is used as a trigger and one or more other features used to verify so as to delete false-positives." (Emphasis added)

Thus, Dimitrova teaches to use a single scene change combined with some other feature, such as black frame/Unicolor frame detection. Thus, even if assuming arguendo that Dimitrova teaches

two consecutive scene changes, there is simply no teaching or suggestion in Dimitrova to detect a commercial or a separator by detecting at least two consecutive scene changes within a number of consecutive frames which is less than a further number of frames of the commercial break.

Similar to Dimitrova, Christopher teaches continuously monitoring a single scene change. In particular, Christopher is directed to a method and apparatus for automatically identifying and selectively skipping segments of a video signal. It is respectfully submitted that Christopher, similar to Dimitrova, teaches detecting a single scene change, as specifically recited throughout Christopher, such as the abstract, lines 6-7 "detect a scene change;" page 11, lines 27-28 "detect a cue which signifies a scene change transition to a commercial advertisement;" page 12, line 1, "such a transition cue;" and page 17, line 20, "a processor responsive to each detected scene change;" where all these references to a scene change or a transition cue are in the singular, and not in the plural thus indicating a single scene change or a transition cue. Therefore, similar to Dimitrova, Christopher also does not teach or suggest detecting a separator

which is defined by detecting at least two consecutive scene changes within a number of consecutive frames, which is less than a further number of frame of the commercial break, as recited in independent claims 1, 7, 10 and 20.

Detecting a separator which is defined by detecting at least two consecutive scene changes within a number of consecutive frames, which is less than a further number of frame of the commercial break, as recited in independent claims 1, 7, 10 and 20, is nowhere taught or suggested in Suito, Dimitrova, Christopher, or combinations thereof.

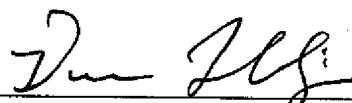
Accordingly, it is respectfully submitted that independent claims 1, 7, 10 and 20 should be allowable. In additions, claims 2-6, 8-9, 11-19 and 21-24 should be allowable at least based on their dependence from independent claims 1, 7, 10 and 20.

In addition, Applicant denies any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicant reserves the right to submit further arguments in support of the above stated position,

should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

In view of the above, it is respectfully submitted that the present application is in condition for allowance, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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July 9, 2007

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